

Fiscal impact reports (FIRs) are prepared by the Legislative Finance Committee (LFC) for standing finance committees of the Legislature. LFC does not assume responsibility for the accuracy of these reports if they are used for other purposes.

FISCAL IMPACT REPORT

SPONSOR	Sen. Ortiz y Pino/Rep. Roybal Caballero	LAST UPDATED	1/23/2024
SHORT TITLE	Geothermal Electricity Tax Credit	BILL NUMBER	Senate Bill 58
		ANALYST	Graeser

REVENUE* (dollars in thousands)

Type	FY24	FY25	FY26	FY27	FY28	Recurring or Nonrecurring	Fund Affected
PIT/CIT			(\$1,180.0)	(\$2,370.0)	(\$3,550.0)	Recurring	General Fund
GRT/Comp		(\$3,020.0)	(\$3,020.0)	(\$3,020.0)	(\$3,020.0)	Recurring	General Fund
Local Gov't Hold Harmless		(\$850.0)	(\$850.0)	(\$850.0)	(\$850.0)	Recurring	General Fund
Gen Fund Total		(\$3,870.0)	(\$5,050.0)	(\$6,190.0)	(\$7,420.0)	Recurring	General Fund
Property Tax		\$30.0	\$50.0	\$70.0	\$80.0	Recurring	GOB Fund
Property Tax		\$750.0	\$1,380.0	\$1,800.0	\$2,090.0	Recurring	Local Property Tax Beneficiaries
Property Tax Total		\$780.0	\$1,430.0	\$1,870.0	\$2,170.0	Recurring	

Parentheses () indicate revenue decreases.

Note: this estimate of fiscal impact assumes the installation of about 10MW each year.

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT* (dollars in thousands)

Agency/Program	FY24	FY25	FY26	3 Year Total Cost	Recurring or Nonrecurring	Fund Affected
EMNRD		\$97.0	\$97.0	\$194.0	Recurring	General Fund
TRD		\$349.0	--	\$349.0	Nonrecurring	General Fund
TRD		\$83.0	\$83.0	\$166.0	Recurring	General Fund
Total		\$529.0	\$170.0	\$699.0		General Fund

Parentheses () indicate expenditure decreases

Note: these impacts were reported for 2023's SB173

Duplicates House Bill 92

Sources of Information

LFC Files

LFC FIR for 2023 SB173

Agency Analysis Received From

Taxation and Revenue Department (TRD)

Energy, Minerals and Natural Resources (EMNRD)

SUMMARY

Synopsis of Senate Bill 58

Senate Bill 58 amends the Tax Administration Act, Income Tax Act, Corporate Income and Franchise Tax Act, and Gross Receipts and Compensating Tax Act to create three tax incentives to assist in developing the technology to generate electricity from geothermal formations.

- Section 1: Creates a new hold harmless distribution to counties and municipalities equal to local revenue impacts of the Gross Receipts and Compensating tax deduction created in Section 4.
- Section 2 and 3: Creates the geothermal electricity generation income tax credit. This credit is applicable to tax years starting January 1, 2024, and ends prior to January 1, 2032. This credit is for a taxpayer who holds an interest in a geothermal electricity generation facility. The credit amount is equal to 1.5 cents per kilowatt-hour of electricity generated in New Mexico in a taxable year by the facility. The taxpayer will apply for certification of eligibility for the credit with the Energy, Minerals, and Natural Resources Department (EMNRD). The tax credit is also available for geothermal electricity generation that takes place prior to January 1, 2031, generated by an existing facility, if that existing facility increases its generation capacity by at least 100 percent after July 1, 2024. The joint personal/corporate income tax credit is capped at \$5 million each calendar year. If applications exceed the cap in any year, the amount in excess can be claimed in the year following. If approved, EMNRD will issue a certificate to the individual. This credit has a three-year carry forward and is not refundable. The Taxation and Revenue Department (TRD) will be required to provide an annual report on this credit and the companion GRT deduction.
- Section 4: Creates a new deduction from gross receipts tax and compensating tax starting July 1, 2024, and ending prior to July 1, 2032. These deductions are for the sale of tangible personal property and services in connection with the construction and equipping a geothermal electricity generation facility, tangible personal property installed as part of the system used for the distribution of the electricity from the facility, and construction plant costs purchased by a person who holds an interest in a facility. Each deduction from gross receipts tax has a mirrored deduction for compensating tax. These six deductions will be required to be reported separately to TRD. TRD will be required to provide an annual report on these deductions. Currently established facilities can become eligible for the deductions if production doubles after the effective date of the act.

The effective date of this bill is January 1, 2025. The provisions of Sections 2 and 3 are applicable to tax years beginning on or after January 1, 2025.

FISCAL IMPLICATIONS

This bill creates several tax expenditures. Estimating the cost of these tax expenditures is difficult as confidentiality requirements surrounding certain taxpayer information create uncertainty, and analysts must frequently interpret third-party data sources. The statutory criteria for a tax expenditure may be ambiguous, further complicating the initial cost estimate of the expenditure's fiscal impact. Once a tax expenditure has been approved, information constraints

continue to create challenges in tracking the real costs (and benefits) of tax expenditures. LFC staff has serious concerns about the substantial risk to state revenues from tax expenditures and the increase in revenue volatility from erosion of the revenue base.

Ultimately, the tax incentives provided in this bill when added to substantial federal tax incentives available via the Infrastructure Reduction Act (IRA) are likely to stimulate private and public investment in geothermal electricity generation projects.¹ “

There are three aspects of the development of the geothermal electricity generation industry that may create a fiscal impact for state and local governments:

1. The capital cost of a commercial project creates a gross receipts and compensating tax liability for the developer. The provisions of Section 4 allow GR&CTA deductions totally abating the state and local gross receipts tax (GRT) for the capital costs of the project. Note that if the developers apply for and are granted an Industrial Revenue Bond for the project, this would abate a portion² of the property tax as well as the full amount of the gross receipts tax, making the deduction of this bill irrelevant. Further, any geothermal facility in operation in the state that doubles the nameplate capacity would become eligible for these tax incentives.
2. The personal/corporate income tax production credit of 1.5 cents per kilowatt-hour is capped at \$5 million total each year for the period from July 1, 2024 to July 1, 2032. The personal/corporate income tax credit means the \$5 million credit will be associated with the generation of over 300 thousand megawatt-hours of electricity, enough to power 120 thousand to 270 thousand homes for a year.
3. The provisions of this bill do not provide any property tax abatement. Geothermal electricity generation equipment is considered 5-year MACRS property and is therefore considered business personal property and not real property. The assessed value of personal property is the amount shown on the company’s annual depreciation schedule. Most of the recent renewable solar and wind projects have applied to county governments for sponsorship of Industrial Revenue Bonds allowed by sections 4-59-2 and 4-59-4 NMSA 1978 for counties and 3-32-1 and 3-32-6 NMSA for municipalities. It is likely developers of geothermal electricity generation facilities will apply for sponsorship of an Industrial Revenue Bond to abate a portion of the property taxes and the full amount of state and local gross receipts and compensating taxes on contracted goods and services.

See attachment 1 for estimated tax credit costs and potential property taxes (in the absence of IRB approval).

TRD’s analysis is quite similar to LFC’s, while being less specific about timing of the impacts.

Estimated Revenue Impact*					R or NR**	Fund(s) Affected
FY2024	FY2025	FY2026	FY2027	FY2028		
--	(\$1,000) (\$5,000)	(\$1,000) (\$5,000)	(\$1,000) (\$5,000)	(\$1,000) (\$5,000)	R	Section 2 and 3 - General Fund – PIT and CIT

¹ <https://www.eavor.com/blog/next-generation-geothermal-energy-hits-new-mexico-policy-makers-want-it-to-stay/>

² If a county sponsors an Industrial Revenue Bond and agrees to abate the initial GRT and ensuing property tax, there is a payment in lieu of taxes (PILT or PILOT) which is somewhat less than the property taxes otherwise imposed. Legislation last year modified the distribution of any PILT.

--	(\$115)	(\$118)	(\$127)	(\$125)	R	Section 1- General Fund hold harmless
--	\$115	\$118	\$122	\$125	R	Section 1 - Local Government hold harmless
--	(\$119)	(\$123)	(\$127)	(\$130)	R	Section 4 – General Fund - GRT and comp

TRD explains its methodology as follows:

New Mexico is home to several geothermal electricity generation facilities that harness the state's substantial geothermal resources. These facilities utilize the heat from underground reservoirs to generate electricity, providing a renewable and sustainable energy source. Lightning Dock Geothermal Power Plant, located in Animas Valley, Hidalgo County, is one of the largest geothermal power plants in New Mexico. It has a capacity of 4.7 megawatts³ (MW) and utilizes binary cycle technology to generate electricity. At least two other plants are also in operation, the Jemez Mountains Electric Cooperative (JMEC) Geothermal Plant, situated in the Valles Caldera National Preserve near Jemez Springs, and the Gila Hot Springs Geothermal Power Plant, located near the town of Silver City.

New Mexico has a growing geothermal energy sector, but the total electricity generation from geothermal sources in the state is relatively small compared to other renewable energy sources.

Installed Capacity: According to the U.S. Energy Information Administration (EIA) data from 2020, New Mexico had a total installed capacity of approximately 34 megawatts (MW) from geothermal power plants.

Geothermal Energy Contribution: Geothermal energy accounts for a small percentage of New Mexico's total electricity generation. In 2020, geothermal sources in the state produced around 175,000 megawatt- hours¹ (MWh) of electricity. To put this into perspective, New Mexico's total electricity generation that year was over 55 million MWh, indicating that geothermal energy made up a small fraction of the overall generation mix.

Due to the geothermal electricity generating industry being in a developing phase and the absence of published expansion plans by major companies, it is challenging to determine the precise fiscal impact of this legislation. However, given the presence of three operating plants generating geothermal electricity, it is assumed they will apply for and claim the income tax credits in Sections 2 and 3 of the bill.

To estimate the fiscal impact of developing additional geothermal plants and associated GRT deductions, TRD used data published at the University of Michigan. Capital costs for conventional geothermal power plants in the U.S. are approximately \$2,500 per installed kilowatt of capacity⁴. The U.S. has tapped less than 0.7 percent of geothermal electricity resources; the majority can become available with Enhanced Geothermal System technology. In 2021, there were 3,692 MW of geothermal electricity plants in operation in

³ A megawatt hour (Mwh) is equal to 1,000 Kilowatt hours (Kwh). It is equal to 1,000 kilowatts of electricity used continuously for one hour. It is about equivalent to the amount of electricity used by about 330 homes for one hour.

⁴ <https://css.umich.edu/publications/factsheets/energy/geothermal-energy-factsheet>

the U.S.—the most of any country—and development has been growing at a rate of 3 percent per year^{5,6}. TRD assumed New Mexico’s geothermal electricity market will expand and grow at a rate of the national average for the next five years. The calculation of yearly capital costs eligible for GRT deductions involves multiplying the annual growth in geothermal electricity production in New Mexico by \$2,500 per kilowatt. The fiscal impact is based on the statewide effective GRT rate. The hold harmless distributions in Section 1 assume that some portion of new construction will occur in municipalities and thus those municipalities will receive the additional 1.225 percent in distributions.

SIGNIFICANT ISSUES

This bill narrows the GRT base. Many New Mexico tax reform efforts over the last few years have focused on broadening the GRT base and lowering the rates. Narrowing the base leads to continually rising GRT rates, increasing volatility in the state’s largest general fund revenue source. Higher rates compound tax pyramiding issues and force consumers and businesses to pay higher taxes on all other purchases without an exemption, deduction, or credit.

TRD notes the following policy issues:

Tax incentives, while intended to support specific industries or behaviors, complicate the tax code. This leads to: (1) special treatment and exceptions, reducing the general fund and narrowing the tax base; and (2) increased compliance burden for taxpayers and TRD. Adding complexity and exceptions to the tax code is generally not considered good tax policy.

The tax credit provided in this legislation has a sunset date. Sunset dates allow policymakers to review the impact of tax expenditures before deciding whether to extend them. It might be wise to impose a cap on the credit per individual facility to prevent a single taxpayer from utilizing the entire credit limit.

The hold-harmless payments to local governments contained in this bill complicate TRD’s distributions extensively in an effort to shift a relatively immaterial amount of revenue to local governments. The proliferation of new distributions required to be automated in Gentax puts TRD’s mission at risk. Errors in distributions can create costly litigation between the State and local governments. Similarly, local hold-harmless payments make filing tax returns more complex for GRT taxpayers, adding risk that taxpayers will file incorrectly and eventually cause revenue clawbacks that can be disastrous to local governments.

The state General Fund currently transfers payments to local governments. Under Section 7-1-6.4 NMSA 1978, State gross receipts tax revenues are already shared with all municipalities. Section 7-1-6.5 NMSA 1978 provides a distribution to the small county’s assistance fund; Section 7-1-6.16 NMSA 1978 provides for a county equalization distribution; and pursuant to Sections 7-1-6.46 and 7-1-6.47 NMSA 1978, distributions are made to certain municipalities and counties, respectively, to offset the cost of food and

⁵ U.S. Geological Survey (2008) Assessment of Moderate- and High-Temperature Geothermal Resources of the United States.

⁶ U.S. Department of Energy, IEA Geothermal (2022) 2021 United States Country Report.

health care practitioner deductions. In addition, local governments have their own GRT and compensating taxing authority.

While tax incentives may support particular industries or encourage specific social and economic behaviors, the proliferation of such incentives complicates the tax code. 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 both taxpayers and TRD. Adding complexity and exceptions to the tax code does not comport generally with the best tax policy.

The credit has a defined end date to claim the tax credit and thus a sunset date. TRD supports sunset dates for policymakers to review the impact of tax expenditures before extending them. Additionally, it may be prudent to cap a single facility so one taxpayer does not take up the aggregate cap on the credit.

The proposed hold harmless distribution to local governments complicates the administration of this credit. Additionally, it shifts the entire revenue loss associated with incentivizing geothermal energy to the state, although the cities and counties in which such activity occurs will benefit from the economic development. TRD recommends eliminating the hold harmless provision and instead allowing cities and counties to participate in incentivizing economic development within their local areas.

EMNRD has contributed the following comments:

Geothermal resources with temperatures that exceed 250 Fahrenheit qualify and construction costs for “drilling of wells to at least twelve thousand feet” are covered by the tax credit. Excluded are sources from oil, hydrocarbon gas and other hydrocarbon substances, and also excluded is the natural heating and cooling capacity of the earth such as used by heat pump systems.

Geothermal electricity in New Mexico is likely to be a critical component to transitioning the state to a renewable energy future which maintains (or improves) reliability and affordability. Geothermal electricity production is reliable, baseload power that is dispatchable at any time, produces near-zero carbon emissions, and has a small physical footprint. According to the SMU Geothermal Laboratory Map developed in 2011, New Mexico is in the top tier in potential for geothermal potential compared to most states in the US. Also, the 2019 GeoVision Report developed by the National Renewable Energy Lab shows that under the technical improvement scenario, by 2050 production could increase by 1000-2500 MW in New Mexico. The incentive provided by this tax credit will help reach our potential.

Currently, there is one utility-scale geothermal electricity generation facility operating in the state: Lightning Dock in Hidalgo County, which has a capacity of 15.2 MW of electricity. Many other sites in New Mexico show promising geothermal development potential, including sites in Rincon, Radium Springs, and San Diego Mountain in Dona Ana County; Hillsboro in Sierra County; McGregor in Otero County; and Lower Frisco Hot Springs in Catron County, as well as many sites along the Rio Grande.

The now-expired Renewable Energy Production tax credit program was very helpful in developing wind and solar photovoltaic energy resources in New Mexico. Geothermal resource development is more capital-intensive and riskier than either wind or solar development as it requires exploration onto a largely unknown resource, but potentially adding dramatic value to the state's grid, resiliency, and emissions reduction. EMNRD believes this tax credit would be an effective incentive.

The bill requires that EMNRD stop certification of applications once the annual cap of \$5 million is exhausted. Five million dollars would have the potential to provide tax credits for a little over

PERFORMANCE IMPLICATIONS

EMNRD notes: "Adding new tax credit certification obligations to EMNRD without providing for staff to administer them will slow down processing for all tax credits, especially the New Solar Market Development tax credit and the Sustainable Buildings tax credit."

The LFC tax policy of accountability is met with the bill's requirement to report annually to an interim legislative committee regarding the data compiled from the reports from taxpayers taking the credit and deduction and other information to determine whether the credit and deduction are meeting their purpose.

ADMINISTRATIVE IMPLICATIONS

EMNRD has concerns over the cost of administering these credits, although relatively few taxpayers will be eligible for these credits.

To administer SB58, EMNRD will require at least one additional FTE. This FTE will be necessary for EMNRD to a) establish rules; b) develop applications for the credit; c) review and certify the applications; d) conduct continuous annual monitoring and appropriate allocation of the credit at each geothermal electricity facility. The FTE would need to be technically qualified to perform these actions, placing them in pay band 75, with a total recurring cost of \$97 thousand per year including benefits.

EMNRD has calculated this fiscal impact based on its experience administering the Renewable Energy Production Tax Credit, which had similar provisions to SB58.

TRD has similar administrative concerns:

TRD will need to make information system changes and update forms, instructions, and publications. Staff training to administer the credit will need to take place. It will be necessary to either modify the existing NTTC form or create a new one to accommodate the deductions in Section 4.

TRD's Administrative Services Division (ASD) will test credit sourcing and perform other systems testing. In addition, ASD will need to define and test requirements for new GRT distributions to local governments. These new distributions will also require changes to revenue reports and audit financial statements. It is anticipated this work will take approximately 140 hours split between 2 Full-Time Equivalent (FTE) of a pay band 70, pay band 80 and a pay band 90 at a cost of approximately \$9,000.

Implementing this bill will have a high impact on TRD’s Information Technology Division (ITD), approximately 1,500 hours or about 9 months and an estimated \$330 thousand in contractual costs. Much of this cost is the result of the hold harmless distributions to local governments required in Section 1. This implementation will be included in the annual tax year changes.

TRD’s Revenue Processing Division (RPD) will review certifications to assure compliance of credits. Currently, all certifications must be entered manually, so increasing the number of claims would increase the administrative workload for RPD. TRD is currently in discussion with EMNRD to share certification information electronically but has not agreed upon terms of the interagency data sharing. TRD assumes that electronic transfer of credit information will not occur before the effective date of the bill. Without required statutory language, RPD will need to add one FTE, an Accountant Auditor-A, to process the addition of another credit.

FY2024	FY2025	FY2026	3 Year Total Cost	R or NR	Fund(s) or Agency Affected
--	\$9	--	\$9	NR	TRD – ASD – staff workload
--	\$330	--	\$330	NR	TRD- ITD – contractual
--	\$83	\$83	\$166	R	TRD- RPD – FTE
--	\$10	--	\$10	NR	TRD- RPD – one time FTE costs

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

CONFLICT, DUPLICATION, COMPANIONSHIP, RELATIONSHIP

Senate Bill 58 is a duplicate of House Bill 92.

OTHER SUBSTANTIVE ISSUES

In assessing all tax legislation, LFC staff considers whether the proposal is aligned with committee-adopted tax policy principles. Those five principles:

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

In addition, staff reviews whether the bill meets principles specific to tax expenditures. Those policies and how this bill addresses those issues:

Tax Expenditure Policy Principles	Met?	Comments
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.	✓	Previously presented as SB173 in 2023.
Targeted: The tax expenditure has a clearly stated purpose, long-term goals, and measurable annual targets designed to mark progress toward the goals. Clearly stated purpose Long-term goals Measurable targets	✗ ✗ ✗	Implicit is the development of a geothermal electricity generation industry, but no goals are stated.
Transparent: The tax expenditure requires at least annual reporting by the recipients, the Taxation and Revenue Department, and other relevant agencies	✓	
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. Public analysis Expiration date	✓ ✓	Separate reporting is required.
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. Fulfills stated purpose Passes “but for” test	✗ ✗	Federal Renewable Investment Credits or Renewable Production Credits provide sufficient incentives for the industry to thrive.
Efficient: The tax expenditure is the most cost-effective way to achieve the desired results.	?	
Key: ✓ Met ✗ Not Met ? Unclear		

WHAT WILL BE THE CONSEQUENCES OF NOT ENACTING THIS BILL

Lacking the tax expenditures of this bill may slow down the development of this industry.

Attachment

1. Estimated tax credit costs and potential property taxes

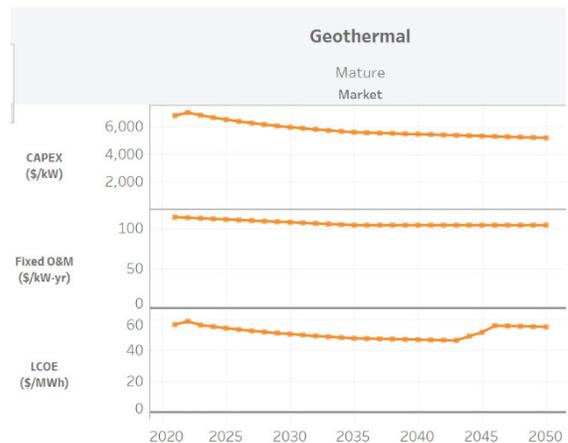
LG/rl/ne/al

Attachment 1

Based on these assumptions, see below for estimated tax credit costs and potential property taxes (in the absence of IRB approval):

	FY25	FY26	FY27	FY28	FY29	FY30
Initial Installation (Kilowatts)	10,000	10,000	10,000	10,000	10,000	10,000
Cost per Watt	\$6.20	\$6.20	\$6.20	\$6.20	\$6.20	\$6.20
GRT/Comp Deduction (\$1,000)	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000
	4.88%	(\$3,023)	(\$3,023)	(\$3,023)	(\$3,023)	(\$3,023)
	1.38%	(\$853)	(\$853)	(\$853)	(\$853)	(\$853)
Annual Cumulative Production (MwH)	78,894	157,788	236,682	315,576	631,152	946,728
Cumulative Production Tax Credit	\$0.015	(\$1,180.0)	(\$2,370.0)	(\$3,550.0)	(\$4,730.0)	(\$5,000.0)
Cumulative Property Tax Net Taxable (\$ millions)		\$20,460	\$37,442	\$48,858	\$56,936	\$63,010
Exhibit: State GOBs (Mills)	1.36	\$30.0	\$50.0	\$70.0	\$80.0	\$90.0
Exhibit: Typical Local Rate (County operating, County Debt, School Operating, School Debt, Higher Ed, Hospital, Special District -- Mills)	36.76	\$750.0	\$1,380.0	\$1,800.0	\$2,090.0	\$2,320.0

These estimates are based on the following scenario which assumes the installation of 10 MW annually, with an 90 percent duty cycle and middle estimates of capital expenses (CAPECX), fixed operations and maintenance expenses (Fixed O & M) and levelized cost of energy (LCOE) as shown in the following chart from the National Renewable Energy Laboratory (NREL).¹



¹ [tb.nrel.gov/electricity/2022/geothermal](https://www.nrel.gov/electricity/2022/geothermal)