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Revised Fiscal Note

(replaces fiscal note dated March 14, 2022)

Drafting Number:	LLS 22-0346	Date:	April 6, 2022
Prime Sponsors:	Sen. Woodward; Hinrichsen Rep. Holtorf; Valdez D.	Bill Status:	House Energy and Environment
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Bill Topic: **ENCOURAGE GEOTHERMAL ENERGY USE**

Summary of Fiscal Impact:	<input checked="" type="checkbox"/> State Revenue	<input checked="" type="checkbox"/> TABOR Refund
	<input checked="" type="checkbox"/> State Expenditure	<input checked="" type="checkbox"/> Local Government
	<input type="checkbox"/> State Transfer	<input type="checkbox"/> Statutory Public Entity

This bill modifies certain statutory provisions that apply to solar energy so that they also apply to geothermal energy systems. It also directs the Colorado Energy Office to develop basic consumer education materials about leased and purchased geothermal installations. Beginning in FY 2022-23, the bill increases state revenue and expenditures, decreases local government revenue, and increases local government expenditures.

Appropriation Summary: For FY 2022-23, the bill includes an appropriation of \$15,000 to the Colorado Energy Office.

Fiscal Note Status: The fiscal note reflects the reengrossed bill.

**Table 1
State Fiscal Impacts Under SB 22-118**

		Budget Year FY 2022-23	Out Year FY 2023-24
Revenue	Cash Funds	\$42,000	\$42,000
Expenditures	General Fund	\$15,000	-
Transfers		-	-
Other Budget Impacts	General Fund Reserve	\$2,250	-
	TABOR Refund	\$42,000	\$42,000

Summary of Legislation

The bill adds geothermal energy systems to statutory provisions that under current law apply to solar energy systems. Specifically, the bill:

- limits the aggregate charges assessed by state or local government to install geothermal systems;
- specifies that geothermal equipment is a type of pollution control device that may be certified as pollution control equipment;
- includes geothermal systems in the definition of projects that may be funded through county or municipal revenue bonds;
- permits a county board of commissioners, regional planning commissions, and municipal development commission to assure access to appropriate conditions for geothermal energy source development in master plans;
- specifies that geothermal energy system installation is not an alteration for the purposes of local zoning requirements;
- adds geothermal energy devices to the types of renewable energy generation devices that cannot be prohibited in legal instruments related to the sale or transfer of real property;
- creates community geothermal gardens, which are analogous to community solar gardens;
- requires the Public Utilities Commission to determine the minimum and maximum purchases by qualifying retail utilities of electrical output from community geothermal gardens in compliance years 2026 and beyond; and
- requires the Colorado Energy Office to develop consumer education about leases or purchased geothermal installation.

Background

Geothermal energy systems generally transfer heat from the earth to generate electricity or to heat or cool space or water. Geothermal electricity-generating facilities draw steam from underground reservoirs of hot water to rotate a turbine that activates a generator. Geothermal resources used for heating and cooling space and water use wells or buried pipes to transfer heat through either an open-loop or closed-loop system.

Closed-loop geothermal systems circulate a fluid, typically water or an antifreeze solution, through a series of buried pipes. As the fluid passes through the ground, it absorbs heat from the surrounding soil, rock, or ground water. The heated fluid returns to the building where it is used for space or water heating. Once the heat is transferred to the building, the water returns at a lower temperature to the ground loop to repeat the process. This process operates in reverse in cooling mode.

Open-loop geothermal systems use well or surface body water as the heat exchange fluid that circulates through the system and returns to the ground through a well or surface discharge. These systems require a sufficient supply of water. The Colorado State Capitol utilizes an open-loop two well system to heat and cool the building, and is the first state capitol in the country to be cooled with a geothermal system.

State Revenue

Beginning in FY 2022-23, the bill will increase state cash fund revenue from geothermal well permit fees, as described below and shown in Table 2.

Table 2
Fee Impact on SB 22-118

Fee Type	Fund	FY 2022-23	FY 2023-24
Permit Fee	Water Resource Cash Fund	\$42,000	\$42,000
	Total	\$42,000	\$42,000

Fees on geothermal permit applications. To the extent that geothermal permit applications to DWR increase, fee revenue to the Water Resources Cash Fund will increase. Geothermal resources in the state are administered by the State Engineer within the Division of Water Resources (DWR) in the Department of Natural Resources. As authorized by the Geothermal Resources Act, DWR reviews and issues permits for geothermal wells, defined as a well that is constructed for the purpose of exploration, use of a geothermal resource, or reinjection of a geothermal fluid. In calendar years 2020 and 2021, DWR processed almost 90 geothermal permit applications per year, with application fees of \$480 each. Assuming the bill doubles the number of permit applications (an additional 90 permits per year), the bill would result in about \$42,000 in additional revenue. This revenue is subject to TABOR.

State Expenditures

The bill increases state expenditures in the Colorado Energy Office by \$15,000 in FY 2022-23 from the General Fund. It increases state workload across a number of other state departments, as described below.

Colorado Energy Office. The bill increases state expenditures in the Colorado Energy Office by \$15,000 in FY 2022-23 to hire a consultant to research and develop basic consumer education materials related to geothermal installations, as the office does not have in-house expertise in geothermal technology and finance. Costs are based on similar contract work and hourly rates paid by the office.

Department of Local Affairs. The Division of Property Taxation within the Department of Local Affairs will have an increase in workload to assess community geothermal gardens as public utilities. The division will need to amend existing tax forms for renewable energy properties and develop procedures for assessing community geothermal gardens. The extent of the workload impact is unknown and will depend on the number of community geothermal gardens installed in future tax years. This fiscal note assumes the workload is absorbable, and that DOLA will request resources through the annual budget process once more is known about the number of properties installed.

Department of Natural Resources. To the extent that this bill increases applications for geothermal permits and installer certification, the DWR will have increased workload to process these applications. The DWR may need to amend Geothermal Rules to add additional detail related to community geothermal gardens. This fiscal note assumes this work can be accomplished within the ordinary course of business.

Department of Public Health and Environment. The Department of Public Health and Environment may have an increase in workload to certify geothermal equipment as pollution control equipment. The Department does not currently have a certification program because they have not received any requests to certify any pollution control equipment. If the bill creates requests to certify geothermal equipment beyond the department's capacity, this fiscal note assumes resources will be requested through the annual budget process.

Department of Regulatory Agencies. The PUC will promulgate rules related to community solar gardens and establish the minimum and maximum purchases by qualifying retail utilities in renewable energy standard compliance plans. This workload can be accommodated within existing resources.

Other Budget Impacts

General Fund reserve. Under current law, an amount equal to 15 percent of General Fund appropriations must be set aside in the General Fund statutory reserve beginning in FY 2022-23. Based on this fiscal note, the bill is expected to increase the amount of General Fund held in reserve by \$2,250 in FY 2022-23, which will decrease the amount of General Fund available for other purposes.

TABOR refunds. The bill is expected to increase the amount of state revenue required to be refunded to taxpayers by the amounts shown in the State Revenue section above. This estimate assumes the March 2022 LCS revenue forecast. A forecast of state revenue subject to TABOR is not available beyond FY 2023-24. Because TABOR refunds are paid from the General Fund, increased cash fund revenue will reduce the amount of General Fund available to spend or save.

Local Government

The bill impacts local governments in several areas, as described below.

Master plans. Beginning in FY 2022-23, local governments may have expenditures related to updating local zoning plans to include methods for assuring access to appropriate conditions for geothermal energy sources.

Fee limits. Limiting the aggregate fees assessed by counties and municipalities on geothermal energy systems may reduce local government revenue. To the extent that the aggregate fee limits are insufficient to cover a local government's actual costs of issuing permits, local general fund or other fund sources may be required to subsidize the full cost of this work. Impacts will vary by local government and depend on current fee structures, geothermal installation activity, and the costs to perform this work. As a result, these local impacts cannot be estimated.

Effective Date

The bill takes effect 90 days following adjournment of the General Assembly sine die, assuming no referendum petition is filed.

State Appropriations

For FY 2022-23, this bill requires and includes a \$15,000 General Fund appropriation to the Colorado Energy Office.

State and Local Government Contacts

Colorado Energy Office
County Assessors
Judicial
Local Affairs
Personnel
Public Health and Environment

Counties
Information Technology
Law
Municipalities
Regulatory Agencies