



**CONGRESSIONAL BUDGET OFFICE
COST ESTIMATE**

February 1, 2012

S. 1142
Geothermal Exploration and Technology Act of 2011
*As ordered reported by the Senate Committee on Energy and Natural Resources
on December 15, 2011*

SUMMARY

S. 1142 would authorize the Secretary of Energy to provide loans and grants to support certain activities related to the production and consumption of geothermal energy. Assuming appropriation of the necessary amounts, CBO estimates that implementing S. 1142 would cost \$67 million over the 2012-2017 period. Pay-as-you-go procedures do not apply to this legislation because it would not affect direct spending or revenues.

S. 1142 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA).

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of S. 1142 is shown in the following table. The costs of this legislation fall within budget function 270 (energy).

	By Fiscal Year, in Millions of Dollars						2012- 2017
	2012	2013	2014	2015	2016	2017	
CHANGES IN SPENDING SUBJECT TO APPROPRIATION							
Estimated Authorization Level	15	15	15	15	15	15	90
Estimated Outlays	4	8	11	14	15	15	67

BASIS OF ESTIMATE

S. 1142 would authorize the appropriation of amounts necessary—for fiscal years 2012 through 2021—for the Department of Energy (DOE) to provide direct loans and grants to promote the development and use of technologies that generate energy from geothermal resources. The bill would authorize the Secretary of Energy to make direct loans to defray the costs of high-risk geothermal exploration wells. In contrast to the budgetary treatment for federal credit programs required under the Federal Credit Reform Act, S. 1142 would credit repayments of such loans to a separate fund that would be available, without further Congressional action, to support new loans under the bill—thereby increasing the estimated subsidy cost of loans to 100 percent of their aggregate face value. S. 1142 also would authorize DOE to make grants to state and local governments, institutions of higher education, and certain other entities to promote the development of geothermal heat pumps and direct use of geothermal energy, particularly on a large scale.

Based on information from DOE and industry sources, CBO estimates that making appreciable progress toward objectives set forth in S. 1142 would require appropriations totaling \$15 million annually. (By comparison, CBO estimates that federal funding for geothermal technologies and related activities in 2012 totals about \$50 million.) That estimate is based in part on the cost of geothermal programs carried out under the American Recovery and Reinvestment Act, which provided funds for DOE to undertake activities similar to those authorized by S. 1142. Under S. 1142, CBO anticipates that DOE would provide a small number of new loans for exploration wells each year and increase the number of projects to demonstrate large-scale use of geothermal technology. Assuming appropriation of the necessary amounts, CBO estimates that implementing the bill would cost \$67 million over the 2012-2017 period, with additional spending occurring in later years.

PAY-AS-YOU-GO CONSIDERATIONS: None.

INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT

S. 1142 contains no intergovernmental or private-sector mandates as defined in UMRA. The bill would authorize grants to state and local governments, institutions of higher education, and other entities to promote the development of geothermal technologies. Any costs to those entities would be incurred voluntarily as conditions of federal assistance.

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