

## S 1142

### Geothermal Exploration and Technology Act of 2011

**Congress:** 112 (2011–2013, Ended)

**Chamber:** Senate

**Policy Area:** Energy

**Introduced:** May 26, 2011

**Current Status:** Placed on Senate Legislative Calendar under General Orders. Calendar No. 314.

**Latest Action:** Placed on Senate Legislative Calendar under General Orders. Calendar No. 314. (Feb 7, 2012)

**Official Text:** <https://www.congress.gov/bill/112th-congress/senate-bill/1142>

## Sponsor

**Name:** Sen. Tester, Jon [D-MT]

**Party:** Democratic • **State:** MT • **Chamber:** Senate

## Cosponsors (3 total)

Cosponsor	Party / State	Role	Date Joined
Sen. Murkowski, Lisa [R-AK]	R · AK		May 26, 2011
Sen. Reid, Harry [D-NV]	D · NV		May 26, 2011
Sen. Begich, Mark [D-AK]	D · AK		Aug 1, 2011

## Committee Activity

Committee	Chamber	Activity	Date
Energy and Natural Resources Committee	Senate	Reported By	Feb 7, 2012

## Subjects & Policy Tags

### Policy Area:

Energy

## Related Bills

No related bills are listed.

Geothermal Exploration and Technology Act of 2011 - (Sec. 2) Requires the Secretary of Energy (DOE) to: (1) establish a direct loan program for high risk geothermal exploration wells, and (2) give preference to applicants for loans to carry out projects that are likely to lead to successful new geothermal development leading to electricity production. Requires data from exploratory wells to be provided to the DOE Secretary (Secretary) and the Secretary of the Interior for use in mapping national geothermal resources and other uses, including subsurface geologic data, metadata, borehole temperature data, and inclusion in DOE's National Geothermal Data System. Authorizes the Secretary to: (1) base the cost share percentage for loans on a sliding scale, with higher federal shares awarded to projects with higher risks; and (2) grant further delays or dispense with the repayment obligation on a demonstration that a selected geothermal project is unproductive. Requires the Secretary to determine the number of wells for each selected geothermal project for which a loan may be made.

Requires the recipient of a loan under this Act for a geothermal facility to commence repayment of the loan beginning on the earlier of four years after the loan is made or when the geothermal facility enters into commercial production.

Establishes the Geothermal Investment Fund to carry out such program. Requires amounts repaid on loans to be deposited in such Fund. Authorizes appropriations for such Fund for FY2012-FY2021. Requires the Secretary to report annually on such Fund's operations.

Requires the Secretary to issue guidelines for the implementation of such program. Requires such guidelines to specify: (1) the terms and conditions that would require a higher or lower level of cost sharing, (2) the conditions under which the Secretary will allow loan modifications or forgiveness in cases in which a well cannot be used for production or injection, and (3) the information necessary to provide a loan applicant with certainty about the administration of the program, including the level of cost and risk that the applicant and the Secretary will assume. Directs such guidelines to require that: (1) loans be provided only after the developer has committed the share of the developer for expenditures for drilling costs, and (2) loans for successful wells be repaid by the developer within a 10-year period.

(Sec. 3) Amends the Energy Independence and Security Act of 2007 to require: (1) the Assistant Secretary for Energy Efficiency and Renewable Energy to establish a program of research, development, demonstration, and commercial application for geothermal heat pumps and the direct use of geothermal energy; and (2) the Assistant Secretary to identify and mitigate potential environmental impacts.

Authorizes the program to include research, development, demonstration, and commercial application of: (1) geothermal ground loop efficiency improvements through more efficient heat transfer fluids or more efficient thermal grouts for wells and trenches; (2) geothermal ground loop installation cost reduction through improved drilling methods, improvements in drilling equipment, improvements in design methodology and energy analysis procedures, and improved methods for determination of ground thermal properties and ground temperatures; (3) installing geothermal ground loops near the foundation walls of new construction to take advantage of existing structures; (4) using gray or black wastewater as a method of heat exchange; (5) improving geothermal heat pump system economics through integration of geothermal systems with other building systems; (6) advanced geothermal systems using variable pumping rates to increase efficiency; (7) geothermal heat pump efficiency improvements; (8) use of hot water found in mines and mine shafts and other surface waters as the heat exchange medium; (9) heating of districts, neighborhoods, communities, large commercial or public buildings, and industrial and manufacturing facilities; (10) geothermal system integration with solar thermal water heating or cool roofs and solar-regenerated desiccants to balance loads and use building hot water to store geothermal energy; (11) use of hot water coproduced from oil and gas recovery; (12) direct use of water sources at a

temperature of less than 150 degrees Celsius; (13) system integration of direct use with geothermal electricity production; and (14) coproduction of heat and power, including on-site use.

Directs the Assistant Secretary to: (1) make grants to state and local governments, institutions of higher education, nonprofit entities, utilities, and for-profit companies to promote the development of geothermal heat pumps and the direct use of geothermal energy; (2) give priority to proposals that apply to large buildings, commercial districts, and residential communities; (3) conduct a national solicitation for grant applications; and (4) report on the progress made and results obtained under this Act to develop geothermal heat pumps and direct use of geothermal energy.

Authorizes appropriations for such program for FY2012-FY2016.

(Sec. 4) Amends the Geothermal Steam Act of 1970 to provide that land under an oil and gas lease issued pursuant to the Mineral Leasing Act or the Mineral Leasing Act for Acquired Lands that is subject to an approved application for a permit to drill and from which oil and gas production is occurring may be available for leasing, if the lease would serve the public interest, for geothermal drilling in order to provide for the coproduction of geothermal energy with oil and gas.

## **Actions Timeline**

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- **Feb 7, 2012:** Committee on Energy and Natural Resources. Reported by Senator Bingaman with amendments. With written report No. 112-145.
- **Feb 7, 2012:** Placed on Senate Legislative Calendar under General Orders. Calendar No. 314.
- **Dec 15, 2011:** Committee on Energy and Natural Resources. Ordered to be reported with amendments favorably.
- **Jul 12, 2011:** Committee on Energy and Natural Resources. Hearings held. Hearings printed: S.Hrg. 112-253.
- **May 26, 2011:** Introduced in Senate
- **May 26, 2011:** Read twice and referred to the Committee on Energy and Natural Resources.